



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,648	08/28/2001	Yoshiki Yoshida	DAIN:518A	5528

7590 08/27/2002

PARKHURST & WENDEL, L.L.P.
Suite 210
1421 Prince Street
Alexandria, VA 22314-2805

EXAMINER

THOMPSON, TIMOTHY J

ART UNIT	PAPER NUMBER
----------	--------------

2873

DATE MAILED: 08/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,648

Applicant(s)

YOSHIDA ET AL.

Examiner

Timothy J Thompson

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 13-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11, 13-17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/363,687.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 13, 16, 17, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. (U.S Patent No. 6,101,031) in view of Masahiro (E.P. Patent No. EP 0825460A2).

Regarding claim 11, Yoshimura et al. discloses; (1) a base part (fig 1); (2) an entrance lens forming the entrance surface and having an array of a plurality of convex lens elements capable of gathering light rays(fig 1, 11); (3) a light absorbing layer formed in the exit-side light-nongathering regions(fig 1, 13); (4) an exit lens part formed on the exit surface and having an array of a plurality of lens elements formed respectively in light gathering regions in which light rays refracted by the convex lens elements of the entrance lens part gather(fig 1). Yoshimura et al. does not disclose a tinted layer formed on at least a portion of the entrance lens part or that the lens is formed from an individual base joined by additional material on each surface so as to form the final desired shape. Regarding the tinted layer, Masahiro discloses a tinted layer formed on at least a portion of the entrance lens part(fig 3A, 13) stating that this without reducing the intensity this exhibits fine contrast(page 6, lines 10-25). It would have been

Art Unit: 2873

obvious to one skilled in the art at the time of the invention to add a tinted layer to a portion of the entrance lens, as shown by Masahiro, in the lenticular lens of Yoshimura et al., since as shown by Masahiro, tinting a portion of the entrance lens is commonly done to exhibit fine contrast in the display. Regarding, the lens being formed from a separate base with additional layers attached to this base. It would have been obvious to one skilled in the art at the time of the invention was made to form the lens from a base with additional material joined to each surface, as opposed to forming the lens from one individual piece, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. In re Lindberg, 93 USPQ 23 (CCPA 1952).

Regarding claim 13, Yoshimura et al. discloses the lens elements on the exit lens part are either convex or concave towards the exit surface(fig 1).

Regarding claim 16, Yoshimura et al. does not disclose a tinted layer extending along the light receiving surface of entrance lens part. However, Masahiro discloses a tinted layer extending along the light receiving surface of entrance lens part (fig 3A, 13). It would have been obvious to one skilled in the art at the time of the invention to disclose a tinted layer extending along the light receiving surface of entrance lens part, as shown by Masahiro, in the lenticular lens of Yoshimura et al., since as shown by Masahiro, a tinted layer extending along the light receiving surface of the entrance lens part is commonly done to create a lenticular lens which exhibits fine contrast in the display.

Regarding claim 17, Yoshimura et al. discloses; (1) a lenticular sheet having an entrance surface and an exit surface(fig 6, 4);(2) a fresnel lens sheet

Art Unit: 2873

disposed opposite to the entrance surface of the lenticular lens sheet facing an image light source(fig 6, 3); (3) a base part (fig 1); (4) an entrance lens forming the entrance surface and having an array of a plurality of convex lens elements capable of gathering light rays(fig 1, 11); (5) a light absorbing layer formed in light-nongathering regions(fig 1, 13)(6) an exit lens part formed on the exit surface and having an array of a plurality of lens elements formed respectively in light gathering regions in which light rays refracted by the convex lens elements of the entrance lens part gather(fig 1). Yoshimura et al. does not disclose a tinted layer formed on at least a portion of the entrance lens part or that the lens is formed from an individual base joined by additional material on each surface so as to form the final desired shape. However, Masahiro discloses a tinted layer formed on at least a portion of the entrance lens part(fig 3A, 13) stating that this, without reducing the intensity, exhibits fine contrast(page 6, lines 10-25). It would have been obvious to one skilled in the art at the time of the invention to add a tinted layer to a portion of the entrance lens, as shown by Masahiro, in the lenticular lens of Yoshimura et al., since as shown by Masahiro, tinting a portion of the entrance lens is commonly done to exhibit fine contrast in the display.

Regarding claim 20, Yoshimura et al. does not specifically disclose, the lens being formed from a separate base having flat sides with additional layers attached to the base. It would have been obvious to one skilled in the art at the time of the invention was made to form the lens from a base with additional material joined to each surface, as opposed to forming the lens from one individual piece, since it has been held that constructing a formerly integral

Art Unit: 2873

structure in various elements involves only routine skill in the art. In re Lindberg, 93 USPQ 23 (CCPA 1952).

Regarding claim 21, Yoshimura et al. does not specifically disclose, the lens being formed from a separate base having flat sides with additional layers attached to the base. It would have been obvious to one skilled in the art at the time of the invention was made to form the lens from a base with additional material joined to each surface, as opposed to forming the lens from one individual piece, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. In re Lindberg, 93 USPQ 23 (CCPA 1952).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over as Yoshimura et al. (U.S. Patent No. 6,101,031) and Masahiro (E.P. Patent No. EP 0825460A2), applied to claim 11 above, and further in view of Ludwig, Jr. et al. (U.S. Patent No. 5,307,205).

Regarding claim 14, a modified Yoshimura et al., as detailed in claim rejection 11 above, does not disclose a tinted front layer contains a light diffusing material. However, Ludwig, Jr. et al. discloses a tinted front layer contains a light diffusing material stating it provides a good balance of resolution, gain and contrast when used as a rear projection screen(col 1, lines 50-56). It would have been obvious to one skilled in the art at the time of the invention to add a light diffusing material to the tinted layer, as shown by Ludwig, Jr. et al., in the lenticular lens display screen of a modified Yoshimura et al., since as shown by

Art Unit: 2873

Ludwig, Jr. et al., adding a light diffusing material to the tinted layer of a display screen is commonly done for good balance of resolution, gain and contrast of the image displayed on the display screen.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over as Yoshimura et al. (U.S Patent No. 6,101,031) and Masahiro (E.P. Patent No. EP 0825460A2), applied to claim 12 above, and further in view of Ludwig, Jr. et al. (U.S. Patent No. 5,307,205).

Regarding claim 15, a modified Yoshimura et al., as detailed in claim rejection 12 above, does not disclose a tinted front layer contains a light diffusing material. However, Ludwig, Jr. et al. discloses a tinted front layer contains a light diffusing material stating it provides a good balance of resolution, gain and contrast when used as a rear projection screen(col 1, lines 50-56). It would have been obvious to one skilled in the art at the time of the invention to add a light diffusing material to the tinted layer, as shown by Ludwig, Jr. et al., in the lenticular lens display screen of a modified Yoshimura et al., since as shown by Ludwig, Jr. et al., adding a light diffusing material to the tinted layer of a display screen is commonly done for good balance of resolution, gain and contrast of the image displayed on the display screen.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over as Yoshimura et al. (U.S Patent No. 6,101,031) and Masahiro (E.P. Patent No.

EP 0825460A2) as applied to claim 17 above, and further in view of Ananian (U.S. Patent No. 4,907,090).

Regarding claim 19, a modified Yoshimura et al., as detailed in claim rejection 17 above, does not disclose a tinted front plate disposed opposite to the exit surface of the lenticular lens sheet. However, Ananian discloses a tinted front plate disposed opposite to the exit surface of the lenticular lens sheet, stating that this protects the display screen from foreign objects (fig 4, 12 and col 2, lines 50-55 and col 1, lines 53-58). It would have been obvious to one skilled in the art at the time of the invention to add a tinted front plate disposed opposite to the exit surface of the lenticular lens, as shown by Ananian, in the lenticular lens display screen of a modified Yoshimura et al., since as shown by Ananian, a tinted front plate disposed opposite to the exit surface of the lenticular lens sheet of a display screen is commonly done for protecting the display screen from foreign objects.

Response to Arguments

Applicant's arguments filed 05/29/02 have been fully considered but they are not persuasive. With regards to the applicant's argument that the display screen "is inherently designed sufficiently to reduce external light from a viewing side by the arrangement in the lenticular lens itself, particularly the placement of black stripes and the arrangement of the exit lens part", the examiner disagrees. The black stripes are placed so as to prevent a light eclipse due to the peak

Art Unit: 2873

portion on the entrance side of the lenticular lens. The black stripes were not designed to prevent light incident on the viewer's side of the screen from reflecting back towards the viewer, thus degrading the picture quality. Infact, the applicant's U.S. Patent No. 6,241,181 shows that even with the light absorbing areas on the viewers side of the screen, light incident on the viewers side of the screen is still a problem, when it comes to picture quality, due the reflective properties of the lenticular screen(Yoshida et al. Pat No. 6,421,181; fig 2). Therefore, it would have been obvious, to one skilled in the art, to place the tinted layer on the entrance side of the lens so as to prevent light incident on the viewers side of the screen from reflecting back towards the viewer.

Conclusion

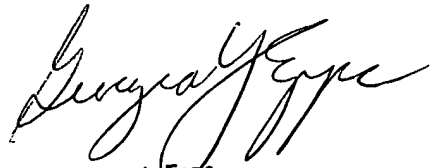
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

Art Unit: 2873

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (703) 305-0881. If the examiner can not be reached his supervisor, Georgia Epps, can be reached on (703) 308-4883.



Georgia Epps
Supervisory Patent Examiner
Technology Center 2800